

Remarks

This is in response to the Office Action of July 16, 2003. Figure 13 has been amended. Claims 1-10 remain pending. Reconsideration and allowance are respectfully requested in view of the following remarks.

In section 1 of the Office Action, it was noted that Figure 13 should be designated as "Prior Art." Included herewith is one replacement sheet including Figure 13 designated as "Prior Art." Consideration and entry of the replacement sheet are respectfully requested.

In section 2 of the Office Action, claims 1-3, 5-7, and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takekoshi et al., U.S. Patent No. 5,600,619, in view of Park, U.S. Patent No. 5,986,998. This rejection is respectfully traversed.

Claim 1 is directed to an optical pickup. Claim 1 recites that the optical pickup includes a movable portion on which at least a plurality of semiconductor laser elements irradiating an optical recording medium with laser beams and an objective lens converging laser beams emitted from the semiconductor laser elements are mounted. Claim 1 also recites that an optical axis of the semiconductor laser element having the shortest wavelength is aligned with the center of the optical axis of the objective lens.

It can be advantageous to configure an optical pickup as recited by claim 1 so that an optical axis of the semiconductor laser element having the shortest wavelength is aligned with the center of the optical axis of the objective lens because this configuration allows the laser beams from the short wavelength semiconductor laser element, which are more susceptible to lens aberration, to pass through the vicinity of the optical axis of the objective lens, which tends to be less susceptible to lens aberration. Therefore, the influence of lens aberration on signal quality can be reduced. Application, page 11, lines 14-17.

The rejection notes that Takekoshi fails to suggest a plurality of semiconductor laser elements mounted on a moveable portion. The correctness of the remaining portion of the characterization of Takekoshi provided in the rejection is not conceded.

Park discloses an optical head having two vertical cavity surface emitting lasers with different wavelengths. The rejection cites Park as disclosing a plurality of semiconductors, wherein an optical axis of the semiconductor laser element having the shortest wavelength is

aligned with the center of the optical axis of the objective lens. This characterization of Park is respectfully traversed.

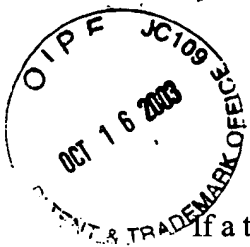
Park discloses a light source 30 that emits the two lasers of different wavelengths. Park, column 3, lines 27-55. Figure 3 of Park illustrates a state at which the two lasers with different wavelengths are collected onto a recording medium 10 by an objective lens 65. Specifically, beams 43 and 53 illustrated in Figure 3 of Park have different radiation angles that are collected onto disks 10a and 10b having different thicknesses, respectively. Park, column 4, lines 32-46.

Park fails to disclose or suggest a relationship between an optical axis of the objective lens and the optical axes of the two laser beams. Consequently, Park fails to disclose an optical pickup including an optical axis of a semiconductor laser element having the shortest wavelength being aligned with the center of the optical axis of an objective lens, as recited by claim 1.

For at least these reasons, neither Takekoshi nor Park, alone or in combination, render claim 1 obvious. Reconsideration and allowance of claim 1, as well as claims 2, 3, 5-7, and 10 that depend therefrom, are respectfully requested.

In section 3 of the Office Action, claim 4 was rejected under section 103(a) as being unpatentable over Takekoshi and Park and further in view of Imafuji, U.S. Patent No. 6,546,035. In section 4 of the Office Action, claims 8 and 9 were rejected under section 103(a) as being unpatentable over Takekoshi and Park and further in view of Nakanishi, U.S. Patent No. 6,473,248. These rejections are respectfully traversed, and the correctness of the rejections is not conceded.

However, claims 4, 8, and 9 all depend directly or indirectly from claim 1. Neither Imafuji nor Nakanishi remedies the shortcomings of Takekoshi and Park noted above with respect to claim 1. Therefore, claims 4, 8, and 9 should be allowable for at least the same reasons as those provided above with respect to claim 1. Reconsideration and allowance of claims 4, 8, and 9 are respectfully requested.

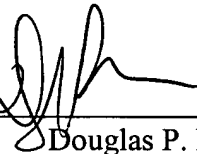


Favorable reconsideration in the form of a Notice of Allowance is respectfully requested.
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 371-5237.

Respectfully submitted,

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By 

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Attachment:
Appendix including one replacement sheet